



# CONTINGENCY AND EMERGENCY RESPONSE PLAN

Aquifer Protection Permit No. P-101704

Temporary Aquifer Protection Permit No. P-106360

Date



Controlled Copy

- |            |   |
|------------|---|
| No. 1 of 5 | Facility General Manager                |
| No. 2 of 5 | Process Test Facility Control Room      |
| No. 3 of 5 | Process Test Facility Supervisor Office |
| No. 4 of 5 | Environmental/Hydrogeology Department   |
| No. 5 of 5 | Taseko                                  |

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## Emergency Response Information

Name of Facility	Florence Copper Inc.
Location of Facility	1575 W Hunt Hwy Florence, Arizona 85132
Latitude/Longitude	33° 03' 00" N / 111° 25' 00" W
Legal Description	Township 4S, Range 9E, Sections 26, 27, 28, 33, 34, and 35, NE¼, NE¼, SE ¼ of the Gila and Salt River Base Line and Meridian
Telephone Number, Main Office	(520) 374-3984
Telephone Number, Process Control Room	(520) 316-3715
Fax Number	(520) 374-3999
Type of Facility	In-situ Copper Recovery (ISCR)

## Florence Copper, Inc. Crisis Communications Team

Crisis Chairperson	Dan Johnson	Office: 520-316-3710 Cell: 520-233-1930
Crisis Coordinator	Glenn Hoffmeyer	Office: 520-316-3700 Cell: 520-431-7321
Media Relations and Communications Coord.	Stacy Gramazio	Office: 520-316-3713 or 520-868-8060 Cell: 520-840-3106
Media Relations and Communications Coord. Alternate	Brian Battison	Office: 778-373-4543 Cell: 604-961-9170

## Environmental On-Call Team

Ian Ream	Sr. Hydrogeologist	Office: 520-316-3701 Cell: 520-840-9604
Jane Fillmore	Environmental Engineer	Office: 520-316-3706 Cell: 520-840-0118

## Emergency Evacuation Meeting Locations:

Admin/Warehousing:	W side of Administrative parking lot
Operations:	SE Corner of Process Test Facility parking lot



## Facility Emergency Support Contact Information

### LIFE THREATENING MEDICAL EMERGENCY

Including, but not limited to: Chest pain, difficulty breathing, fainting/loss of consciousness, unchecked bleeding; severe pain, injury to head or spine, heat stroke.

**Call 911.** Give description of patient's location. If safe to do so, deliver immediate first aid as needed while waiting for ambulance. Let Security know where to send responders.

### FIRE/POLICE

Agency	Telephone #
Rural Metro Fire Department (State land - PTF)	480-627-6200 or 911
Pinal County Sheriff's Office (State land - PTF)	520-866-5111 or 911
Florence Fire Department	520-868-7609 or 911
Florence Police Department	520-868-7681 or 911
Security at Florence Copper	520-858-2089

### Non-Life Threatening Medical Treatment

**Serious injury:** Fractures, large cuts, burns, etc. – **Call 911.** Deliver immediate first aid if safe to do so. Let Security know where to send responders.

**Strains, Sprains, Cuts and Abrasions:** Deliver immediate first aid. Transport employee to emergency clinic (see below) for evaluation and treatment if needed.

### Local Urgent Care Clinics and Hospitals

#### Fast-Med Urgent Care (Figure 3)

Hours: 8:00 A.M. to 6:00 P.M. M-F

495 N Pinal Pkwy, Suite 106

Florence, AZ 85132

Phone: **520-868-0573**

Fax: **520-868-0533**

<https://www.fastmed.com/urgent-care-centers/florence-az-walk-in-clinic-north-pinal-parkway/>

#### Banner Urgent Care (Figure 4)

Hours: 8:00 A.M. to 9:00 P.M. 7 days/week

35945 N Gary Rd

San Tan Valley, AZ 85143

Phone: **520-827-5750** 480) 827-5750 480) 827-5750

<https://www.bannerhealth.com/locations/san-tan-valley/banner-urgent-care-gary-empire>

#### Banner Ironwood Medical Center (Figure 2)

Hours: 24/7

37000 N. Gantzel Rd

Queen Creek, AZ 85140

Phone: 480-394-4000

<https://www.bannerhealth.com/locations/queen-creek/banner-ironwood-medical-center>

## Maps and Directions to Emergency Medical Facilities



Figure 1. Emergency Care Facilities near Florence Copper

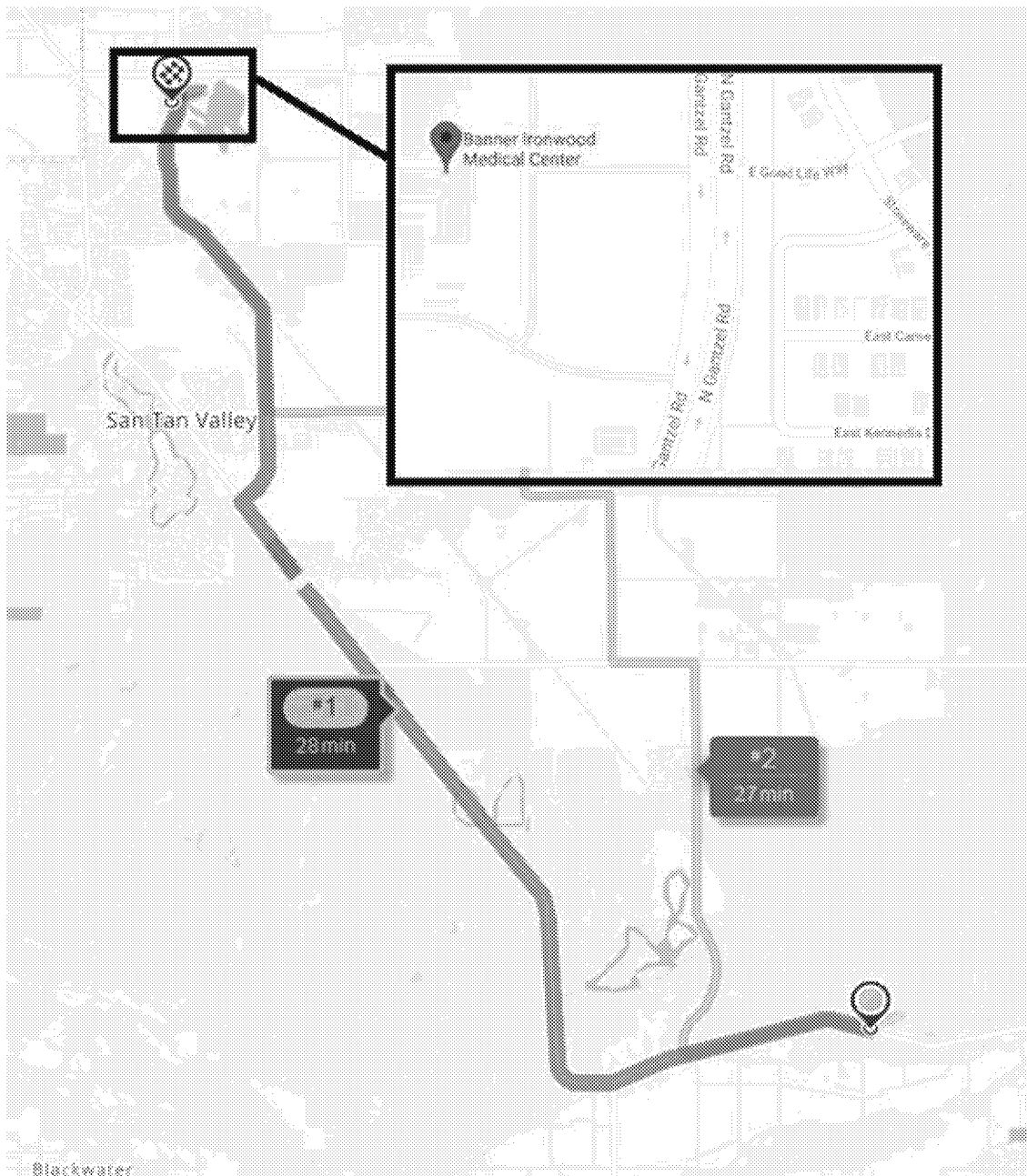


Figure 2. Banner Ironwood Medical Center

**Directions:**

Turn left onto Hunt Hwy for 12.6 miles

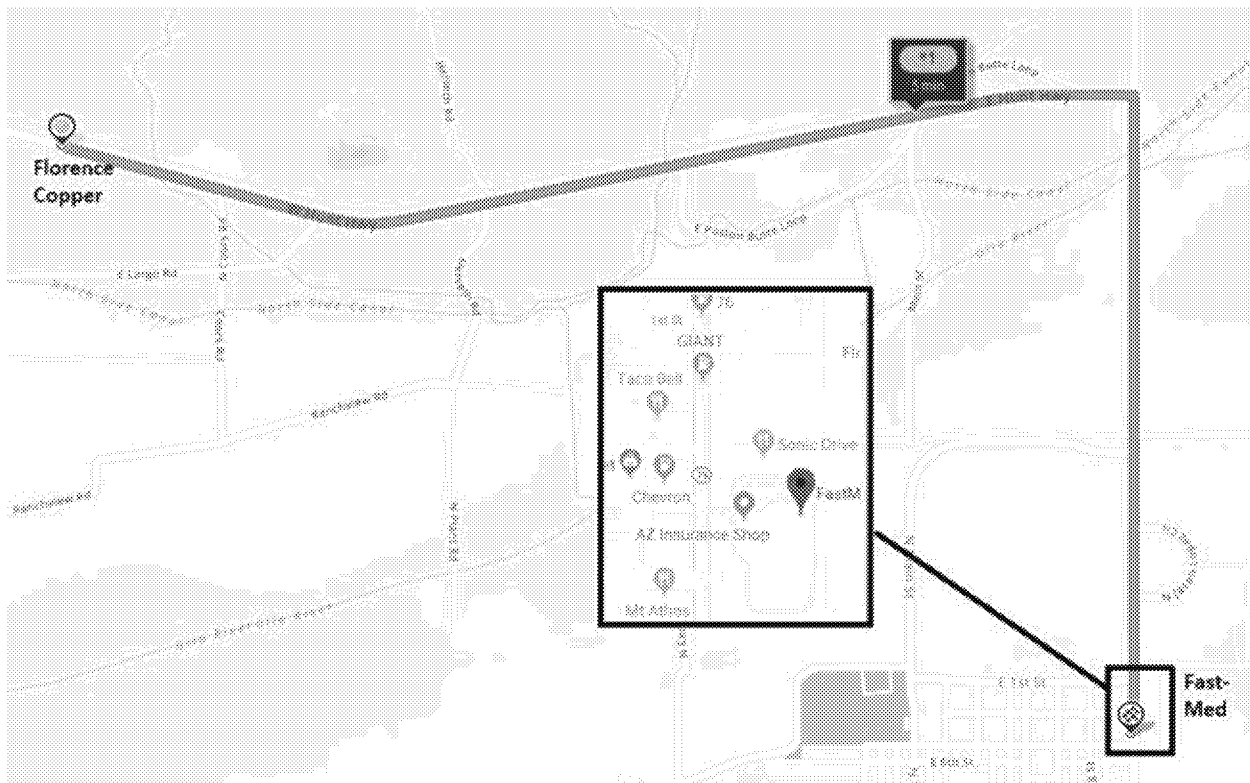
Turn right onto N Gantzel Rd for 5.3 miles

Turn left onto E Good Life Way for 0.1 miles

Turn left. The Hospital is on the right.

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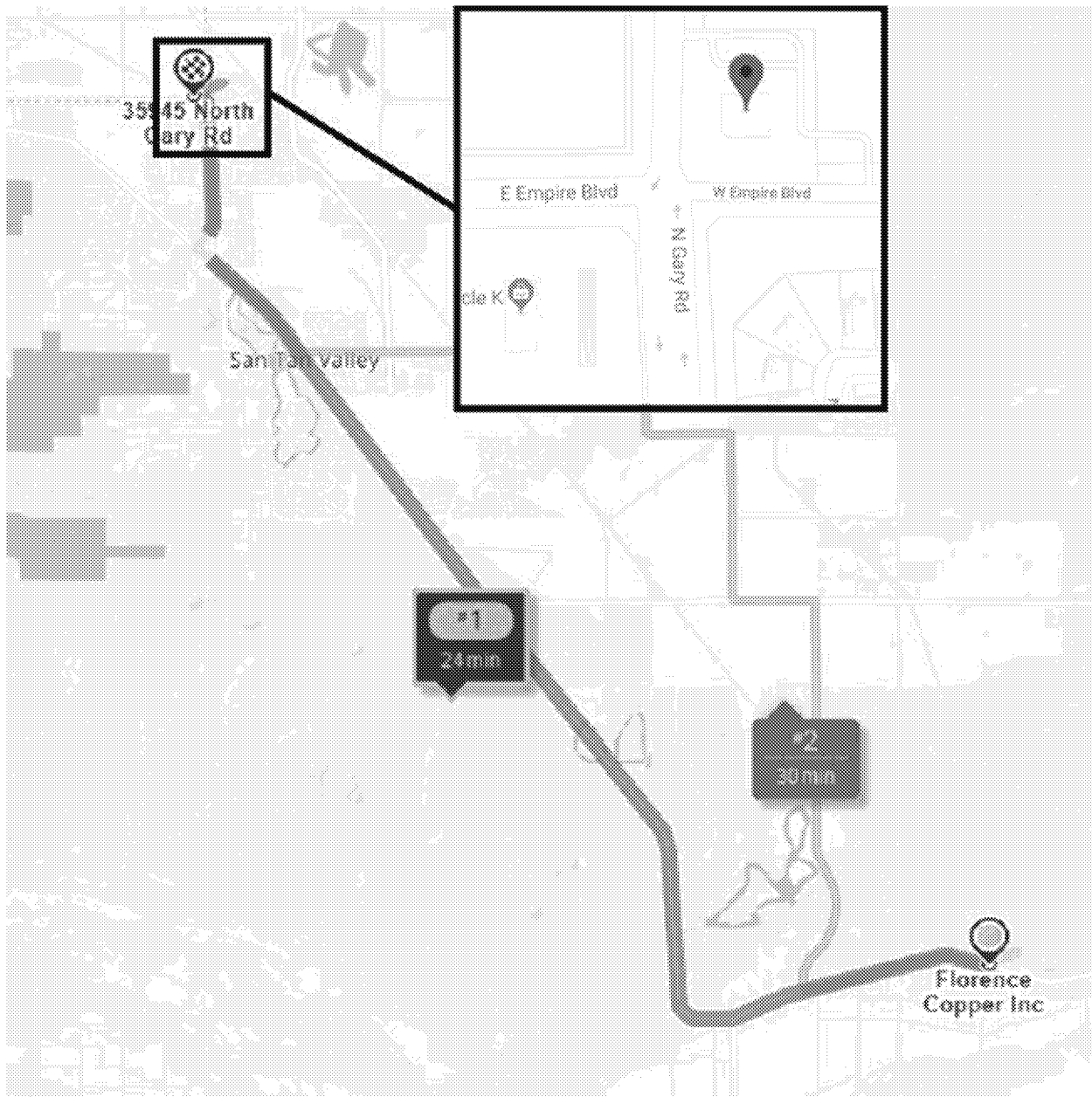
**Figure 3. FastMed**

**Directions:**

Turn right onto Hunt Hwy for 1.8 miles (Road ends at a 'T')

Turn right onto N Pinal Pkwy for 1.4 miles (pass by McDonald's at 1.2 miles)

Turn left, then turn right. Destination is on the right.



**Figure 4. Banner Urgent Care**

**Directions:**

Turn left onto Hunt Hwy for 15.6 miles (past Dunkin Donuts on Rt. at 15.4 miles)

Turn right onto Gary Rd for 1.9 miles

Turn right for 66 feet

Turn right. Your destination is on the right.

## 1. Introduction

### 1.1 Purpose and Scope

Florence Copper, Inc. (Florence Copper) has prepared this Contingency Plan in compliance with requirements of Item 19.G of the Aquifer Protection Permit Amendment Form, with Arizona Administrative Code (A.A.C.) R18-9-A204, Section 2.6.1 of the Temporary Aquifer Protection Plan Permit # P-106360 and Aquifer Protection Permit No. 101704. This Contingency Plan defines policies and procedures for Florence Copper for detecting and responding to:

- An imminent and substantial endangerment to the public health or the environment;
- A violation of an Aquifer Water Quality Standard (AWQS) or an Aquifer Quality Limit (AQL);
- A violation of a discharge limitation;
- A violation of any other permit condition; and
- An exceedance of an Alert Level (AL).

### 1.2 Facility/Site Information

Florence Copper will construct, operate, and reclaim an in-situ copper recovery (ISCR) and electrowinning facility located in Florence, Arizona. The Florence Copper Facility consists of approximately 1,341 acres of land located between Hunt Highway and the Gila River northwest of Florence. Activity is currently being conducted in three main areas: the Administration Area, the Production Test Facility (PTF), and the PTF wellfield. The Administration Area is located on the northeast portion of the site and consists of administrative facilities and some material storage. The PTF and wellfield are located west of the Administrative Area in state-lease land in Township 4S, Range 9E, Section 28, NE¼, NE¼, SE ¼ of the Gila and Salt River Base Line and Meridian (south of the Hunt Highway). The site is accessed via the main gate located on Hunt Highway. Maps of the property and facilities may be found in Appendix A.

Residential areas closest to the Florence Copper facilities are the Town of Florence (Southeast approximately 1.7 miles from the site to town center), and the Anthem at Merrill Ranch development (approximately 3.3 miles to the west). Florence population in 2017 was 25,536 of which 7,836 were household residents with the remainder consisting of inmates in the town's nine prisons<sup>1</sup>.

### 1.3 Commitment to Partnership

Florence Copper recognizes that its facilities provide certain hazards. In addition, certain raw materials used in the in-situ recovery and processing of copper may be reactive - and therefore hazardous - if containment is compromised. As a result, Florence Copper is committed to working with other entities in Pinal County to provide the levels of emergency response necessary to protect our employees, our neighbors, and the general public.

### 1.4 Contingency Plan Elements

The Contingency Plan includes the following elements:

- Document control;

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<sup>1</sup> Population Demographics for Florence, Arizona 2017, 2018 (<https://suburbanstats.org/population/arizona/how-many-people-live-in-florence>)



- An emergency response procedure in the event of an imminent and substantial endangerment to the public health or the environment;
- A description of the general procedures to ensure unauthorized discharges are promptly addressed and mitigated;
- Descriptions of Best Available Demonstrated Control Technology (BADCT) implemented in the design and operation of the in-situ copper recovery and solution extraction/electrowinning (SX/EW) process;
- Descriptions of contingency planning to address specific events;
- Hazardous chemical release response; and
- Reporting and recordkeeping requirements.

These elements are described in detail in the following sections.

## **2.0 Document Control**

Once the Arizona Department of Environmental Quality (ADEQ) approves this Contingency and Emergency Response Plan, it will be maintained in the locations where day-to-day decisions for operating the Florence Copper Production Test Facility (PTF) are made. Additional copies of the document may be maintained at other locations at the Facility, as appropriate. All employees responsible for the operation of the PTF will be advised of the location of the Contingency and Emergency Response Plan.

The Contingency and Emergency Response Plan will be formally reviewed on an annual basis, or in the event of a discharge resulting in any of the conditions identified in Section 1.1, above, whichever comes sooner. ADEQ will be notified of any revisions to the Contingency and Emergency Response Plan. Revisions or additions to corrective actions other than those currently identified in this plan will be submitted for ADEQ review and approval, before implementation.

Document control will be maintained through a "number-copy" system to ensure that all revisions are promptly included and correctly replaced in all copies of the Contingency Plan. The Contingency and Emergency Response Plan, and revisions, will be signed and approved by the Facility general manager.

## **3.0 Emergency Response**

An emergency response procedure will be immediately initiated in the event of imminent and substantial endangerment to the public health or environment, such as the following:

- A release outside of containment that exceeds a reportable quantity limit as per reporting requirements in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or the Superfund Amendments and Reauthorization Act (SARA);
- A breach of a containment pond or catastrophic failure of large tanks; or
- A catastrophic event that causes a release to the environment such as a flood that exceeds the 100-year storm event, an earthquake or fire, civil unrest, or vandalism.

The contingency plan for emergency response includes several steps including designating an emergency response coordinator, notification in the event of an emergency, temporary shutdown if warranted, documentation, and follow-up.



### **3.1 Designation of an Emergency Response Coordinator**

An Emergency Response Coordinator will be designated to be responsible for the activation of this Contingency Plan and emergency response measures.

The Emergency Response Coordinator will be the Facility General Manager, Tech Services Manager, or other employee delegated with the authority to act as Emergency Response Coordinator. Contact information for the Emergency Response Team may be found at the beginning of this document. Other qualified employees may be delegated with the authority to act as Emergency Response Coordinator in the event a team member is not available. The Emergency Response Coordinator will be appropriately trained, and will have a level of experience and supervising authority to commit resources to respond to any event. An appropriate alternate Emergency Response Coordinator may be appointed by the primary Emergency Response Coordinator as necessary.

### **3.2 Emergency Response Call-out Procedure**

The Emergency Response Coordinator's name and telephone numbers will be posted at all times in the PTF control room. The primary Emergency Response Coordinator should be contacted immediately in the event of a life-threatening incident (after calling 911), a catastrophic event, or a serious chemical release. He/she will be responsible for contacting response personnel, Communication Coordinators, and Regulatory Agencies if applicable.

## **4.0 General Procedures for Responding to Unauthorized Discharges**

Florence Copper's Emergency Response Coordinator or his/her designee will report any release or other unauthorized discharge to the environment, as required under state or federal laws. Appendix C contains notification procedures and notification contact lists for the General Manager or his designee.

### **4.1 First Responder Actions**

All personnel will be trained in general first aid, chemical safety, and instruction in the use of Safety Data Sheets (SDS), in accordance with applicable federal, state, and local health, safety, and environmental regulations. In addition, personnel will receive emergency-response training to identify, clean-up, report, and otherwise manage unauthorized discharges relative to the Contingency Plan and related features of the Storm Water Pollution Prevention Plan (SWPPP). Training and response procedures will be reviewed annually and updated, as required.

The first person to take action in the event of an emergency is known as a First Responder. In the event of a release of petroleum product, hazardous material or liquid waste outside of plant containment, the First Responder on the scene will:

- Consider his/her own safety first.
- Ensure that other employees in the area are aware that an emergency condition exists and that an alarm is activated.
- Make a preliminary assessment of the situation in order to:
- Inform the Area Supervisor and Emergency Coordinator of the nature of the emergency, and the quantity and material involved if there was an accidental release.
- Take immediate action, if there is no personal risk, to eliminate the release and/or provide temporary containment.
- Secure the area, if required.

The Supervisor will:

- Instruct the First Responder on the scene whether or not to begin mitigation steps as communicated by the Emergency Coordinator and immediately proceed to the scene.
- Inform the Emergency Coordinator of all vital information to facilitate early response.
- Take responsibility for security and mitigative efforts until the Emergency Coordinator arrives at the scene.

The Emergency Coordinator will evaluate the situation address any immediate health or safety hazards which may include toxic vapors or fumes, contamination of individuals in the release area, and fire or explosion hazards. Once these immediate concerns have been addressed, steps will be taken to totally contain the release in the smallest possible area.

A Spill Prevention, Control, and Counter-Measure (SPCC) Plan will be posted in the Facility control room and reviewed annually.

Facility operations may be temporarily interrupted in the event of an emergency, and as described elsewhere in this document. Interruption procedures will be posted in the Facility control room and elsewhere in the Facility, as warranted.

#### **4.2 Equipment and Supplies**

In the event of an unexpected discharge, the Emergency Coordinator will have full authority and access to the equipment, manpower, and supplies required to contain the release and complete related clean-up activities in the most efficient and expeditious manner possible. The following equipment is available on site and is available as needed for an unexpected discharge response:

- Backhoe;
- Water truck;
- Generator;
- Pumps;
- Fork lift; and
- Other supplies such as sorbent materials, spill kits, dry lime.

#### **4.3 Fire Protection**

Fire extinguishers are located throughout the site. The SX/EW building is equipped with a sprinkler system and a foam fire suppression system with an independent diesel-operated pump in the event of a power outage.

### **5.0 Best Available Demonstrated Control Technology (BADCT) Protective Measures for Potential Discharge or Release Sources**

The PTF and wellfield were designed using the best available demonstrated control technology (BADCT) to address potential sources of an unplanned discharge or release. A description of these controls is contained in the following sections.

#### **5.1 Production Test Facility and Tank Farm**

The Production Test Facility and tank farm is designed to capture and contain releases in a sump, which can be pumped into a characterization tank for re-use in the process or to the neutralization tank for



transfer to the impoundment. Containment is designed to hold a volume equal to 110 percent of the volume of the largest tank. In the unlikely event of the containment overfilling, overflow will be diverted into the run-off pond adjacent to the PTF building.

## **5.2 Acid Unloading Area**

The sulfuric acid unloading area and holding tank are designed with a slope pad and sump to contain any releases or leakage from the offloading or storage of acid used in the ISCR operation. Acid unloading personnel will be trained in the safe handling of the material, and an acid spill kit will be maintained in the area.

## **5.3 Ponds**

All lined ponds will be operated with a minimum of 2 feet of freeboard above design capacity (including sediments, solutions and storm water/direct precipitation from the 100-year, 24-hour storm event). Pond levels will be inspected daily as part of the operators' routine inspections and input flow rates will be manually adjusted or diverted, if pond levels are approaching the minimum freeboard level.

Liners in the ponds and the surface delivery system will be inspected periodically as part of the operators' routine inspections. Any visual damage to the liner will be marked and reported to the area supervisor and repaired within 72 hours.

Periodic inspections will include examining berms for evidence of slope erosion, instability, or possible failure. If an inspection determines a hazard or other condition that may potentially affect safe operation of a pond, the active area will be closed and immediately investigated. The investigation will determine the level of risk associated with the hazard and recommend corresponding responses (e.g., lowering the liquid level, draining the pond, repairs or operational changes to prevent future hazards). The recommended responses will be implemented before the pond is returned to full operational capacity.

### **5.3.1 Process Water Impoundment (PWI)**

The Process Water Impoundment shall be used to store neutralized solution and resulting sediments, and direct precipitation. The PWI is designed with a double liner and equipped with a leak collection and removal system. A sump with an alarm system and sump pump to remove accumulated fluids is located at the lowest elevation of the pond.

### **5.3.2 Run-off Pond**

The Run-off Pond is designed to capture precipitation, stormwater run-off from PTF roofs, slabs, and concrete apron, fire sprinkler water or process solutions that may flow into the SX/EW building sump, releases or wash-down from the PTF, and process upset events. The pond is lined with a 60-mil HDPE textured liner. If fluid reaches a pre-determined set point in the run-off pond, a sump pump will be used to transfer fluid to the Process Water Impoundment.

## **5.4 Wellfield**

All injection and extraction wells and pipelines are sited inside secondary containment consisting of trenches and well pads lined with a 60-mil HDPE liner. These lined trenches extend from the wellfield to the PTF, with sumps at designated intervals containing fluid detection sensors which will alert plant personnel in the event of leakage. Automatic controls and alarms are used in the wellfield to maintain hydraulic control; rates of injection and recovery are also monitored by PTF operators.

## 6.0 General Contingency Plan for Managing Specific Events

Florence Copper has implemented Best Available Demonstrated Control Technology (BADCT) to protect surface water and groundwater at the FCI in-situ copper recovery facility. Specific areas that could possibly be a source of an unauthorized discharge have been identified and general procedures for ensuring that any unauthorized discharges are promptly addressed and mitigated have been developed. These procedures are outlined in the following sections.

### 6.1 Unplanned Discharge or Release Protection Measures

Florence Copper shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment as outlined in Sections 3 and 4.

#### 6.1.1 Discharge of Hazardous Substances or Toxic Pollutants Inside Containment

The Production Test Facility (PTF) is designed to contain process chemical releases. In addition, the area will be equipped with release-response clean-up materials and equipment adequate for small discharges; larger discharges will be contained in the PTF sumps and run-off pond.

#### 6.1.2 Discharge of Hazardous Substances or Toxic Pollutants Outside of Containment

As described in Section 4.1, in the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, Florence Copper shall promptly isolate the area and attempt to contain the discharge and identify the discharged material. The name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident shall be recorded. ADEQ Water Quality Compliance Section shall be notified within 24 hours upon discovering the discharge of hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) could pose an endangerment to public health or the environment. A list of potential hazardous chemicals used on site, including their reporting quantities and locations is located in Appendix B.

##### 6.1.2.1 Containment Procedures

The primary emergency response objectives are to minimize and address any potential immediate health or safety hazard, to limit potential impacts to the smallest possible area, and to facilitate clean-up and disposal activities. In general, containment measures may include construction of temporary containment berms, diversion channels, dikes across downgradient drainage channels, and the use of hay, straw, sand or synthetic sorbent materials.

Protective gear, liquid containment booms, lime for acid neutralization, and waste disposal bins will be maintained in an easily accessed area. Any free dry or liquid chemical released outside of the PTF containment area will be cleaned up as soon as possible.

#### 6.1.3 Discharge of Non-Hazardous Materials Outside of Containment

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, Florence Copper shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. Florence Copper shall notify the ADEQ Water Quality Compliance Section within 24 hours upon discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) could pose an endangerment to public health or the environment.





## 6.2 Temporary Interruption of Operations

Temporary interruption of operations is defined as a process or Facility shutdown, generally limited to a few minutes to an hour, and for not more than 60 days. A temporary interruption may be non-intentional, such as due to a power failure, or intentional for regular maintenance purposes, to inspect or upgrade mechanical equipment or to manage wells in the Florence Copper's *in-situ* copper recovery (ISCR) operations.

If a power outage occurs during normal In-situ operations, all pumps will cease to operate except the plant firewater pump, which will have a diesel operated fire pump. If the power outage is expected to last more than 48 hours, or the well monitoring system indicates a potential loss of hydraulic control, Florence Copper will install temporary portable generators in the wellfield area to maintain hydraulic control.

Once power is restored, the recovery wells will be turned on first, followed by the injection wells. Once the in-situ copper recovery process resumes, it will be inspected to make sure all control devices are in proper working condition.

If any set of injection or recovery headers is turned off for maintenance, Florence Copper will assure hydraulic control is maintained at all times.

## 6.3 Operational Alerts

The wellfield, pipelines and all processing facilities are equipped with sophisticated monitoring systems designed to detect and address accidental releases or discharges. This section briefly describes the monitoring systems, and steps through the contingency plans for responding to various operational alerts that may occur when a monitoring system alarm activates. The discussion begins with contingency planning for the processing facilities.

### 6.3.1 Maintaining Discharge Control in the Tank Farm and Related Infrastructure

The tanks are fitted with level indicators and high-level alarms. Level indicator and alarm signals are routed to the control room, which is staffed 24-hours a day. If a pipeline fails, signified by a rapid change in level, or a tank high-level alarm activates, an alarm will actuate in the control room. The operator will respond by adjusting flows into and out of that particular tank system. If an adjustment cannot be made and the alarm continues, the feed pumps to the tank will be shut down automatically. In the case of system failure, any tank overflow will report to the collection sump which in turn will cause shutdown of feed to the tank, except in the case of rainfall.

The operators will assure that the back-up systems are working as part of their daily and weekly inspection and system verification checks.

### 6.3.2 Surface Delivery/Collection Conduits

The main process pipelines to and from the SX/EW plant to the Wellfield system are contained inside lined channels. The pipelines are equipped with flow-monitoring devices. If a device senses a drop in flow rate signifying a line failure, an alarm will activate in the control room and the feed pump to the line will be shut down. Any released pipeline solutions will be captured in control sumps, and the solutions will be pumped back into the process systems.

Any solution release of 5 gallons or greater that may occur outside of containment because of a breach in the surface delivery/collection conduits will be reported to the Environmental Department. Any free liquid released on the ground will be contained and mitigated, and the soil in the area removed as needed and the area cleaned up. Any breach in the surface delivery system will be repaired prior to that portion of the system being reactivated. The Environmental on-call team, under the authorization of senior management, is responsible for reporting releases to the appropriate state and federal agencies.



### 6.3.3 Maintaining Hydrologic Control in Well Field

#### 6.3.3.1 Significant Variation in Solution Recovery Rates

The volume of solution pumped from the recovery wells must exceed the volume injected on an average daily basis, every day. The operator will monitor the solution volumes into and out of the system and adjust the solution rates whenever the injection volume exceeds the recovered volumes. In order to control solutions and minimize the unnecessary capture of fresh water into the system, the recovered volumes will be maintained close to the injected volume. There may be instantaneous times when injection exceeds recovery, but in no case will the average volume of each solution type for a 24-hour period be allowed to indicate injection exceeds recovery.

### 6.3.4 Loss of Hydraulic Control

A loss of hydraulic control occurs when the amount of fluids injected during a 24-hour period exceeds the amount of fluid recovered for the same 24-hour period. Loss of hydraulic control is also indicated by a less than 1-foot differential observed in any pair of observation and recovery wells averaged over a 24-hour period. Within 24 hours of becoming aware of an Alert Level exceedance as listed in Section 4.1, Table 4.1-8 in the Temporary APP and Table 4.7 of the APP for the loss of hydraulic control within the in-situ leaching area lasting more than 24 hours, the Emergency Response Coordinator or designee will:

1. Notify the ADEQ Water Quality Compliance Section within one (1) day of becoming aware of the alert level exceedance.
2. Adjust flow rates at injection/recovery wells until the recovery volume is greater than the injected volume,
3. Conduct an inspection: testing of piping and wellhead for leaks, injection and recovery lines, pumps, flow meters, totalizers, pressure gauges, pressure transducers, and other associated facilities,
4. Review recent process logs, continuous transducer recordings, meter readings, and other operational control information to identify any unusual occurrences,
5. Initiate pressure testing of the appropriate wells if the loss of fluids cannot be determined to be caused by a surface facility failure, and
6. Repair system as necessary.
7. Within one week a report shall be submitted to ADEQ Water Quality Compliance Section which will include, but not be limited to providing the following information: a) injected volume in the period prior to the alert level exceedance, b) recovered volume in the period prior to the alert level exceedance, c) corrective action taken

### 6.3.5 Exceeding the Injection Pressure Maximum

A pressure transducer will be installed on each injection well and will be monitored in the control room. If for any reason the injection pressure exceeds a pre-set alert limit (AL) and the maximum pressure set for the system is exceeded, Florence Copper Personnel shall:

1. Immediately make flow adjustments to reduce the pressure below alert the level;
2. Immediately investigate to determine the cause of the pressure exceedance, including:
  - a. Inspection, testing, and assessment of the current condition of all components of the injection system that may have contributed to the AL being exceeded, which may include taking the affected well(s) out of service;
  - b. Review of all data, test results and other operational control information to identify any unusual occurrences; and



- c. Repair system as necessary.
3. Within 30 days of an AL being exceeded, Florence Copper shall submit the related data to the ADEQ Water Quality, along with a summary of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.

#### 6.3.6 Well Casing Breach

If an injection well will no longer take the solution being pumped into it, it may be due to changes in bedrock characteristics in the injection and recovery zone (IRZ), or a breach/failure of the injection well casing. If a casing breach is believed to have occurred, the operator will shut down that well, take it out of service, and conduct an inspection. If a well breach has occurred, the well will either be taken out of service and closed permanently in compliance with the Closure Plan, or repaired and placed back into service.

### 6.4 Maintaining Discharge Control in Ponds

#### 6.4.1 Process Solution Impoundment

The Process Solution Impoundment is double-lined with a leak collection and recovery system (LCRS) and is capable of storing over twelve million gallons of liquid with a 2-foot freeboard. The pond is fitted with an alarm that actuates when leakage collects in the pond sump above a pre-determined level. An alarm will prompt an inspection by the operator on duty. The sump will be pumped back into the Process Solution Impoundment and the volume pumped will be measured and recorded. If daily pumped flows exceed a pre-determined Action Leakage Rate (ALR) or Rapid Leakage Rate (RLR), or if leachate accumulates in a pond sump at a rate greater than can be removed, the operator will notify his/her immediate supervisor, and the Environmental Department, who will activate the response to this operational alert as described in Section 2.6.2.2 and 2.6.2.3 of the Temporary APP, and 2.6.2.4 and 2.6.2.5 of the APP. An Alert Level Monitoring Form will be filled out that identifies the pond, the date, time, and rate and volume of leakage, and the pond water elevation.

If the leakage rate exceeds the ALR, the operator will ensure all collected fluid is pumped back to the pond, and will identify and repair all identified points of leakage.

If the leak is determined to exceed the RLR, the Emergency Response Coordinator will be notified, and all flows to the pond will be diverted within 24 hours. The liquid level in the pond will be lowered or the pond completely drained, as necessary, until the leak is identified and repaired. The LCRS systems will be continuously monitored while the pond is refilled and the incident will be reported to ADEQ in the next Quarterly Monitoring report.

#### 6.4.2 Run-off Pond

The Run-off Pond is constructed with 60-mil HDPE liner and is capable of containing up to 49,000 gallons of fluid. The pond will be maintained with a minimum 2-foot freeboard. Along with daily visual inspections, a water level pressure transducer is installed in the pond and is monitored by the operators. If the daily inspection or the level transducer indicates levels encroaching the freeboard limit in the run-off pond, liquid will be pumped back into the process or to the Process Solution Impoundment.

### 6.5 Catastrophic Events

As noted in Section 3.1, catastrophic events may occur that include vandalism, fire, flood, or civil unrest. In any case, if there is a risk that an imminent release may occur, Facility personnel will take immediate



measures to protect the environment and human health. These may include modifying or temporarily interrupting operations, or other measures as deemed appropriate and necessary by the emergency response coordinator.

Any extraordinary event that causes an unauthorized discharge will activate the emergency response procedures for notification as specified under Section 3.2.

## **6.6 Exceeding ALs or AQLs - Groundwater**

The contingency plan for exceeding an AL or AQL in a groundwater sample will be in accordance with procedures as outlined in Part 2.6.2.3 of the Aquifer Protection Permit P-101704, Part 2.6.2.4 of the Temporary APP P-106360, and in A.A.C. R18-9-A204. It consists of collecting additional groundwater samples to verify the exceedance or violation, and associated reporting and mitigation planning, if necessary.

### **6.6.1 Contingency Plan for an AL or AQL Exceedance in Groundwater**

1. If an Operational Condition for BADCT as described in Section 4.1, Tables 4.1.6, 4.1.6B, 4.1.7, and 4.1.7B of the Temporary APP and in Section 4.0, Tables 4.5 and 4.6 of the APP has been exceeded, the permittee shall:
  - a. Request that the laboratory verify the sample results within days. If the analysis does not confirm that an exceedance has occurred, nor further action is required.
  - b. Within 5 days after receiving laboratory confirmation of an AL being exceeded, the permittee shall notify the ADEQ Water Quality Compliance Section and submit written confirmation within 30 days of receiving the laboratory confirmation of an AL exceedance.
2. If the results indicate an exceedance of an AL, the permittee shall conduct a verification sample of groundwater from the well within 15 days from laboratory confirmation. If the verification sample does not confirm that an exceedance has occurred, the permittee shall notify ADEQ Water Quality Compliance Section of the results. No further action is required and Florence Copper shall continue with routine monitoring.
3. If verification sampling confirms that the AL has been exceeded, the permittee shall increase the frequency of monitoring to monthly and analyze for the entire list of parameters listed for quarterly sampling, and increase the frequency to quarterly for the list of semi-annual parameters. The monthly sampling shall continue until the parameter(s) has remained below the AL for three consecutive monthly sampling events. In addition, the permittee shall immediately initiate an investigation of the cause of the AL exceedance, including inspection of all discharging facilities and all related pollution control devices, review of any operational and maintenance practices that might have resulted in an unexpected discharge, and hydrologic review of groundwater conditions including upgradient water quality from existing wells

## **6.7 Remedial Action**

In the unlikely event of a chemical release, or an AL or AQL exceedance requires remedial action, Florence Copper will conduct an investigation and prepare for ADEQ's approval a site remediation plan based upon the degree of clean-up required to restore groundwater quality to AQLs at the POC wells.

## **7.0 Sulfuric Acid and Other Hazardous Chemical Release Response**

Sulfuric acid is used in the in-situ leaching process. Sulfuric acid is a highly regulated substance and is classified as an Extreme Hazardous Substance under the Emergency Planning and Community Right-To-Know Act (EPCRA: 40 CFR 355). Facilities with more than the threshold planning quantity (TPQ) of this

substance are required to notify state and local planning commissions. The TPQ for Sulfuric acid is 1,000 pounds. Sulfuric acid is also a listed CERCLA (Comprehensive Environmental Response Compensation and Liability Act: 40 CFR 302) Hazardous Substance. Notification to state, local, and national response centers is required for releases of a reportable quantity. The reportable quantity (RQ) for sulfuric acid is 1,000 pounds.

As described in Section 3.3, the Production Test Facility is designed to capture and contain any releases or leakages resulting from the unloading or storage of sulfuric acid. In the event sulfuric acid is released outside of containment, an assessment will immediately be made as to the quantity, concentration, and location of the release for reporting and remediation purposes. Depending on the quantity and concentration, the area will immediately be neutralized with lime and later remediated in compliance with regulatory guidelines.

### **7.1 Clean-up Procedures**

Clean up of potentially hazardous wastes requires special precautions, handling, and disposal measures. Clean-up of large hazardous waste releases may be contracted to an environmental clean-up firm. During clean-up operations all personnel involved in the clean-up will wear the appropriate personal protective equipment (PPE). All contaminated materials, including clean-up supplies and protective gear will be placed in approved hazardous waste containers, sealed, and labeled to clearly identify the containers containing hazardous materials in compliance with all Federal, State, and Local regulations.

### **7.2 Local Emergency Responder Coordination**

Florence Copper has contracted with Pinal County Rural Metro to provide emergency response services for the Production Test Facility on the State-lease land. Town of Florence emergency personnel are the responders on Florence Copper property.

## **8.0 Reporting and Recordkeeping requirements**

[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

### **8.1 Agency Reporting**

Depending on the nature of the release or alert level exceedance, the appropriate agencies will be notified as described in Sections 3.2, 6.3, and 6.6.

### **8.2 Operation Inspection/Log Book Recordkeeping**

A signed copy of Florence Copper permits shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms or electronic data) of the inspections and measurements required by the permits shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

- Name of inspector;
- Date and shift inspection was conducted;
- Condition of applicable facility components;
- Any damage or malfunction, and the date and time any repairs were performed;
- Documentation of sampling date and time;



- Any other information required by this permit to be entered in the log book; and
- Monitoring records for each measurement shall comply with R18-9 A206(B)(2).

This Contingency and Emergency Response Plan is intended to serve as guidance for employees and management in meeting regulatory requirements, while ensuring the health and well-being of Florence copper's employees, the community, and the environment. A controlled copy of this plan will be maintained in the locations where day-to-day decisions for operating the Florence Copper Production Test Facility and wellfield are made.